

Serial No. 10/614,895

Attorney Docket No. 01-442

**REMARKS**

Claims 1-26 are pending. Claims 19-26 are new. The applicants respectfully request reconsideration and allowance of this application in view of the above amendments and the following remarks.

Claims 1-5 and 9-18 were rejected under 35 USC 103(a) as being unpatentable over Ban *et al.* in view of Kawaguchi *et al.* and/or Ota *et al.* The applicants respectfully request that this rejection be withdrawn for the following reasons.

Claims 1, 11, 13 and 17 have been amended to incorporate a low capacity state. In the disclosed embodiment of Figs. 6 and 7, the low capacity state is shown where the control valve 4a is set to a minimum value until the motor revolutions increase to R. This amendment is supported at least in Figs. 6 and 7, steps S18 and S19 and paragraphs 0057 and 0058 of the published version of the specification.

Claims 2, 12 and 18 have also been amended to incorporate a low capacity state. In the disclosed embodiment of Figs. 8 and 9, the low capacity state is shown where the control valve 4a is set to a minimum value until the motor revolutions increase to SR. This amendment is supported at least in Figs. 8 and 9, steps S18 and S19 and paragraphs 0057 and 0058 of the published version of the specification.

In addition, claims 17 and 18 have been amended to recite control means instead of a controller. Therefore, claims 17 and 18 are now considered to be means-plus-function claims.

The patent to Ban *et al.* discloses a hybrid compressor control method to make shifting the drive source from the engine to the motor more smooth (See column 9, lines 10 to 13). This

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is achieved by moving the swash plate 19 to its maximum inclination angle position when the operation of the compression mechanism by the motor is started (See column 8, line 66 to column 9, line 3, or step S10 column 7, lines 38 to 49). Subsequently, the rotation of the motor 4 is controlled such that the displacement corresponds to the cooling load (step S11, column 7, lines 50 to 58).

Therefore, the patent to Ban *et al.* does not disclose a control apparatus for a hybrid compressor in which, when a compression mechanism is changed from being driven by the engine to being driven by the motor, the compressor is once switched to a low capacity state before and when the motor is started, which is a feature of the present invention.

The patent to Kawaguchi *et al.* discloses a restoration spring 27 to cause the start inclination of the swash plate 20 to be greater than the minimum inclination when the compressor stops. This restoration spring 27 helps restore the displacement of the compressor promptly (column 6 lines 63 to column 7 line5).

Therefore, the Kawaguchi *et al.* reference does not show or suggest a compressor in which, when a compression mechanism is changed from being driven by the engine to being driven by the motor, the compressor is once switched to a low capacity state and then the displacement is again promptly restored, which is a feature of the present invention.

The published application of Ota *et al.* discloses a control valve control, in which a movable wall 54 responds to differential pressure between the two pressure points provided in the refrigerant circuit and the movable wall 54 is used to change an opening degree of the control valve and to enhance control and responsiveness of the displacement ([0046][0047]).

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The Ota *et al.* reference does not disclose any control of a compressor when the compressor is changed from being driven by an engine to being driven by a motor. Therefore, the Ota publication fails to supply what is missing in Ban *et al.* and Kawaguchi *et al.*

Therefore, the combination of Ban *et al.*, Kawaguchi *et al.*, and Ota *et al.* fails to include the control apparatus claimed in each of claims 1 and 2, 11-13, 17 and 18. That is, with regard to claims 1, 2 and 11-13, the combination fails to include operating a hybrid compressor, after an engine stop, in a low capacity state, in which a displacement of the hybrid compressor is decreased to a second displacement from a first displacement generated by the engine before the engine is stopped. With regard to claims 17 and 18, the combination fails to include operating the hybrid compressor, after the engine stops, in a low capacity state, in which a displacement of the hybrid compressor is decreased to a low capacity displacement, which is smaller than the displacement that exists before the engine is stopped. Therefore, this rejection should be withdrawn.

Claims 6-8 were rejected under 35 USC 103(a) as being unpatentable over Ban *et al.* in view of Kawaguchi *et al.* and/or Ota *et al.* and further in view of Takano *et al.* The applicants respectfully request that this rejection be withdrawn for the following reasons.

Claims 6-8 depend on claim 1. Therefore, claims 6-8 are considered to be patentable over the combination of Ban *et al.*, Kawaguchi *et al.*, Ota *et al.* and Takano *et al.* for the reasons given above with respect to claim 1.

Claims 19-26 are new. Each of claims 19-26 depends on one of the independent claims discussed above. Therefore, Claims 19-26 are considered to be patentable for the reasons given above with respect to their base claims.

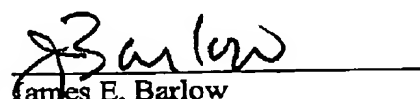
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In view of the foregoing, the applicants submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

If there are any problems with the payment of fees, please charge any underpayments and credit any overpayments to Deposit Account No. 50-1147.

Respectfully submitted,

  
James E. Barlow  
Reg. No. 32,377

Posz Law Group, PLC  
12040 South Lakes Drive, Suite 101  
Reston, VA 20191  
Phone 703-707-9110  
Fax 703-707-9112  
Customer No. 23400